

TDM/WDMA PASSIVE OPTICAL NETWORK

ABSTRACT OF THE DISCLOSURE

A communications network includes a passive optical network (PON), plural user terminals and a central terminal coupled to the PON. Each user terminal includes
5 an optical transmitter for transmitting an upstream signal in an optical channel dedicated to the user terminal and an optical receiver for receiving a shared downstream signal in a shared optical channel. The central terminal includes an optical transmitter for transmitting the shared downstream signal and plural optical receivers each receiving one of the dedicated upstream signals. The central terminal optical transmitter transmits
10 the shared downstream signal in a shared optical channel at wavelength λ_0 and the user terminal optical transmitters transmit the upstream signals in dedicated optical channels at dedicated wavelengths λ_1 to λ_N , respectively.